New Research Suggests Strong Link Between Beverage Consumption and Cardiometabolic Health

Researchers Stress the Importance of Reducing Consumption of Sugar-Sweetened Beverages, Especially in Light of New Dietary Guidelines

WASHINGTON (April 12, 2011) — Today, leading health and research experts are convening at the American Society for Nutrition’s Scientific Sessions and Annual Meeting at Experimental Biology 2011 in Washington, D.C., to review research findings that highlight the growing problem of increased consumption of sweetened caloric beverages and its link to negative health outcomes. During the workshop, “The Global Beverage Picture: Where is the Science Today as Beverage Consumption Relates to Cardiometabolic Health,” experts will share new research updates on the relationship between this upward trend and metabolic syndrome, a cluster of conditions that occur together, has been linked to abdominal obesity, and found to increase a person’s risk for heart disease, stroke and diabetes.

This research is particularly relevant given the recently released 2010 Dietary Guidelines for Americans, published by the U.S. Department of Agriculture and U.S. Department of Health and Human Services, which conclude:

- Beverages contribute substantially to overall diet and calorie intake; American adults consume an average of approximately 400 calories/day as beverages.1

- Soda, energy drinks and sports drinks are major sources of added sugars in American diets (represent 36 percent of added sugar intake).2

- To limit excess calories and maintain a healthy weight – especially when today more than one-third of children and more than two-thirds of adults in the U.S. are overweight or obese – individuals should drink more water and less sugary drinks.3

Building off of the Guidelines’ recommendations, Barry Popkin, PhD, University of North Carolina, Chapel Hill, will highlight the significant increase in the consumption of caloric sweeteners across the globe over the past 20 years, with the main source being sweetened caloric beverages, including: soft drinks, fruit drinks, energy drinks,

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3 Dietary Guidelines for Americans, 2010
vitamin waters, and now the newest addition: high fat sugar-sweetened milk. Dr. Popkin will also discuss the important role water plays in human health and global water promotion efforts.

“From the United States to Europe to Mexico, we are finding significant continued increases in the consumption of sweetened caloric beverages combined with an accelerated shift toward inactivity, poor diet and obesity,” said Dr. Popkin. “In order for individuals across the globe to better manage their health, they need to consider their daily intake of beverage calories and understand the value of water as a healthful beverage option.”

“Beyond weight gain, consumption of sugar-sweetened beverages is also strongly linked to development of metabolic syndrome and diabetes, the latter which is expected to afflict 366 million individuals by the year 2030,” said Frank B. Hu, MD, Harvard School of Public Health. “Putting our research together, we are able to understand the seriousness of this consumption trend as it relates to public health.”

During the workshop, Dr. Hu will speak to the new findings of a recently published paper that revealed a strong relationship between sugar-sweetened beverage consumption and type 2 diabetes risk; George Bray, MD, of Pennington Center, Baton Rouge, will discuss health impacts of sugar, high fructose corn syrup and glucose; and Peter Rogers, PhD, professor in the School of Experimental Psychology at the University of Bristol, UK, will discuss how caffeine might motivate consumption of caffeine-containing beverages as well as highlight caffeine’s health effects.

Research Highlights

- Recent data from the Health Professionals Follow-Up study from the Harvard School of Public Health showed that consumption of sugar-sweetened beverages was associated with increased risk of type 2 diabetes, while consumption of artificially-sweetened beverages was not [de Koning L, Malik VS, Rimm EB, Willett WC, Hu FB. *Am J Clin Nutr*, 2011].

- Recent data from prospective cohort studies in the MEDLINE database up to May 2010 revealed that participants in the highest category of sugar-sweetened beverage intake (most often 1-2 servings/day) had a 26 percent greater risk of developing type 2 diabetes and a 20 percent greater risk of developing metabolic syndrome than participants in the lowest category of intake (none or less than 1 serving/month) [Malik VS, Popkin BM, Bray GA, Després JP, Willett WC, Hu FB. *Diabetes Care*, 2010].

- A recent study of two nationally representative dietary intake surveys from Mexico demonstrated very large increases in caloric beverages among pre-school and school children, with caloric beverages contributing to 27.8 percent and 20.7 percent of the total energy intake among pre-school and school age children, respectively, in 2006 [Barquera S, Campirano F, Bonvecchio A, Hernández-Barrera L, Rivera JA, Popkin BM. *Nutr J.*, 2010].

Dr. Jean-Pierre Després, PhD, Université Laval, Quebec, Canada, and Scientific Director of the International Chair on Cardiometabolic Risk (ICCR) – the host of the workshop – will describe the link between abdominal obesity, metabolic syndrome and cardiometabolic risk. He will also explain why over-consumption of sugar-sweetened beverages is now on the “radar screen” of the ICCR as an important cause of increased cardiometabolic risk.
“We are facing a serious global public health threat caused in part by over-consumption of sugar-sweetened beverages,” said Dr. Després. “Educating people on the link between their beverage consumption habits and their health is an important step toward preventing the rise of chronic diseases.”

About the International Chair on Cardiometabolic Risk (ICCR)

The ICCR is an independent, academic, multidisciplinary organization affiliated with Université Laval and located at the Centre de recherche de l'Institut universitaire de cardiologie et de pneumologie de Québec in Québec City. It is composed of two councils: an Executive Council and a Scientific Council. The members of both councils have been chosen based on their expertise, their remarkable scientific contributions, and their status as world leaders in their discipline.

A key aspect of the Chair is its international and multidisciplinary character, with the following disciplines represented: cardiology, diabetology, lipidology, endocrinology and metabolism, obesity, nutrition, physical activity, and basic research.

The Chair’s goal is to create a platform to examine new ideas, pool member experience and expertise, and share scientific and clinical data to benefit healthcare professionals around the world and the general public. The overarching purpose is to fight the abdominal obesity, diabetes, and cardiovascular disease epidemic sweeping the world.

More information on the ICCR can be found here:

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